



UH4300-12/20/30 4K Ultra HD PTZ Camera

12/20/30x Optical Zoom | 4K 30fps | AI Tracking | Gesture Recognition

Multiple Output Ports | Free-D | NDI®|HX2(optional) | POE+

PoE/USB 3.0/HDMI/LAN/3G-SDI



Core Performance

4K 30fps Video

Using the new generation 1/2.8-inch SONY high-quality sensor, it supports 4K 30fps ultra HD output, suitable for recording large scenes. With 8.29 million effective pixels, it enables multi-range shooting from wide-angle to close-up while maintaining lossless image quality.



Free-D

Built-in FreeD protocol supports real-time spatial data output from the camera, enabling dynamic control of shooting angles and perspectives. It provides precise positioning for virtual studios, AR expansion, and mixed reality production, creating a seamless and immersive audio-visual experience.



Optical+ Digital Zoom

Equipped with 12/20/30x high-quality optical zoom and combined with 16x digital zoom, it allows smooth transitions from wide panoramas to detailed close-ups. Optical zoom preserves image quality, digital zoom extends the field of view, and the dual zoom system removes distance limitations.



NDI®|HX2(optional)

Supports NDI®|HX2 protocol for simultaneous transmission of high-quality audio, video, and control signals over a single cable—delivering low latency, high image quality, smooth PTZ control, and efficient bandwidth use in integrated IP production workflows.



Multiple Output Interfaces

Equipped with full-featured USB 3.0, HDMI, LAN, and 3G-SDI ports, where the USB 3.0/HDMI/LAN ports support 4K ultra HD video synchronous output, the 3G-SDI supports 1080p60 resolution output, and all ports can work simultaneously, ensuring uninterrupted multi-channel signal transmission.



AI Tracking

Equipped with a multi-mode AI tracking algorithm, it supports portrait, gesture, and area recognition for automatic target tracking and intelligent framing—enabling precise follow-shot and image optimization with minimal manual intervention, ideal for presentations, meetings, and teaching.



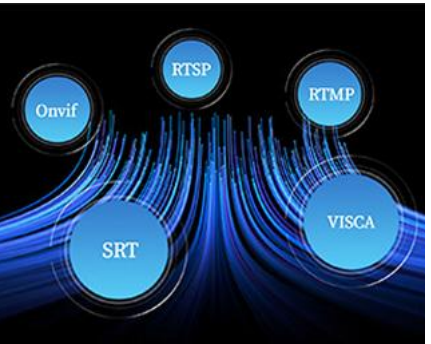
Low-light Imaging

Using an ultra-high signal-to-noise ratio CMOS image sensor combined with advanced 2D/3D dual noise reduction algorithms, it can significantly suppress image noise even in ultra-low light conditions, delivering clear and pure images while ensuring rich details and excellent image quality.



Multi-format encoding and multi-protocol support

This PTZ camera supports H.264/H.265 encoding and network protocols including ONVIF, SRT, RTMP(S), and FreeD—ideal for surveillance, live streaming, professional production. It also features VISCA, ONVIF, and PELCO P/D control compatibility with auto-protocol detection for seamless integration and unified control.



Product Specifications

Camera Parameters

Sensor		1/2.8-inch SONY CMOS Sensor, approximately 8.29 million effective pixels
Zoom	Optical Zoom	12/20/30X
	Digital Zoom	16X
Lens	12X	f=4.1mm(wide)~49.2mm(tele), F1.8~F2.68
	20X	f=5.2mm(wide)~104mm(tele), F1.55~F3.13
	30X	f=5.2mm(wide)~156mm(tele), F1.3~F4.8
Horizontal Field of view		12X : 72.5°(W)~6.57°(T) 20X : 58.7°(W)~3.2°(T) 30X : 58.1° (W)~2.14° (T)
Vertical Field of view		12X : 42.06°(W)~3.76°(T) 20X : 32.2°(W)~1.8°(T) 30X : 33.8° (W)~1.2° (T)
Output Format	HDMI	3840*2160 p30/29.97/25; 1920*1080 p60/59.94/50/30/29.97/25; 1280*720 p60/59.94/50; 1920*1080 i60/59.94/50
	SDI	1920*1080 p60/59.94/50/30/29.97/25; 1280*720 p60/59.94/50; 1920*1080 i60/59.94/50
	USB	MJPEG: 3840*2160, 2560*1440, 1920*1080, 1280*720, 960*540, 640*360
		NV12: 1920*1080, 1280*720, 960*540, 640*360

Gimbal

Preset	Remote Controls: 10, Keyboards: 255, Accuracy: 0.1° ±10%
Gimbal Acceleration Curve	gentle, Standard, Fast
Horizontal Rotation Angle	-171° ~ +171°
Vertical Rotation Angle	-30° ~ +90°
Horizontal Rotation Speed	0.01° ~ 90° /S
Vertical Rotation Speed	0.01° ~ 90° /S

Image Parameters

Noise reduction	2D & 3D
Exposure	Automatic, Manual, Aperture Priority, Shutter Priority
White Balance	Auto, Indoor, Outdoor, One-touch White Balance, Auto Tracking, Manual, Color Temperature
Low light	0.1Lux
Anti-flicker	Off,50Hz,60Hz
Focusing Method	Automatic, Manual
Gamma	Standard, Linear, Pattern, Custom
Inversion/Image Freeze	Support
Backlight Compensation	Support
Flip/Mirror	Support
Defog	Support
Shutter	1/30S ~ 1/10000S
S/N Ratio	≥50dB

Online Streaming

Video Encoding Format	H.264, H.265,MJPEG
Rate Control	Variable bit rate, Constant bit rate
Stream Bitrate	Stream 0 3840*2160, 2560*1440, 1920*1080, 1280*720
	Stream 1 640*360
	Stream 2 1920*1080, 1280*720
Supported Protocol	TCP/IP, HTTP, RTSP, RTMP(S), SRT, ONVIF, DHCP, VISCA Over IP, Free-D, NDI® HX2 (Optional)

Audio Information

Compression Standard	AAC
Audio Bitrate	128kbps

AI Composition

Smart Tracking	Single-Person Tracking, Multi-Person Tracking, Area Tracking, Hybrid Tracking
Gesture Recognition	Turn On,Turn Off, Switch Target
Composition Size	Half Body / Full Body
Composition Mode	Custom, Center, Left, Right
Composition Position	Current Position ,Preset Position ,Initial Position
Horizontal Lock	Support
Pitch Lock	Support
Zoom Lock	Support

Input/Output

HDMI Port	HDMI:Version 1.4 *1 Channel
USB Port	USB 3.0,Type-B Port *1 Channel;USB 2.0 Expansion Input,Type-A Port *1 Channel
SDI Port	3G-SDI*1 Channel
Communication Interface	RS485:3 Core Phoenix Port,Maximum Distance 1200 Meters , VISCA/Pelco-D/P Protocol *1 Channel ; RS232 IN/OUT:8-pin Mini DIN,Maximum Distance 30 Meters, VISCA/Pelco-D/P Protocol *1 Channel
Network Interface	RJ45:10M/100M adaptive Ethernet port *1 Channel (Supports PoE+ (IEEE 802.3at))
Audio Interface	3.5mm Line In audio port *1 Channel
Power Connector	JEITA RC-5320A Type 4

Basic Parameters

Input Voltage	DC 12V
Input Current	Up to 1.5A
Operating Temperature	0~40℃
Power Consumption	Up to 18W
Color	Black
Specifications	240*159*173mm
Weight	1.3KG

Accessory List	DC 12V Power Adapter, IR Remote Control, User Manual, USB 3.0 Video Cable, RS-232 Serial Cable (Optional), HDMI Cable (Optional), Wall Mount/Ceiling Mount Bracket (Choose one of the two)
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Interface Diagram



Structural Dimensions

